an emitter configured to process, (a) the encoded signal to generate predefined pulses of data representing presence of the glasses, and (b) the encoded gaze data representing gaze information of the user captured by the gaze sensor to generate pulses of data representing the gaze data;

the HMD having a sensor that is configured to,

(a) detect the user wearing the HMD by determining proximity of a face of the user to the sensor of the HMD;

(b) determine if the user wearing the HMD is also wearing the glasses;

(c) disable a gaze detection function of the HMD, in response to determining the user wearing the glasses, or activate the gaze detection function of the HMD to capture the gaze information of the user, upon determining the user not wearing the glasses;

wherein the HMD further includes,

a decoder to process pulses of data provided by the emitter of the glasses to provide gaze information of the user; and

an image frame processor configured to process the gaze information provided in the pulses of data by the emitter or captured by the sensor of the HMD to produce image frames for rendering on a display screen of the HMD.

18. The system of claim **17**, wherein the sensor of the HMD is configured with a dual function, wherein a first function is configured to detect proximity of a user, and a second function is configured to receive said encoded signal and said encoded gaze data.

19. The system of claim **17**, wherein the decoder in the HMD is an infrared photo diode or a transceiver.

20. The system of claim **17**, wherein the glasses include one or more optical elements disposed on the frame that are configured to emit light toward the eyes of the user, to enable the gaze sensor of the glasses to capture the gaze data of the user while the eyes of the user are being illuminated by said one or more optical elements.

21. The system of claim **20**, wherein the one or more optical elements is infrared (IR) light emitting diodes (LEDs).

22. The system of claim **20**, wherein the glasses further includes a second set of optical elements disposed on an outside surface of the frame, the second set of optical elements configured to be activated upon detecting presence of the HMD on the user, to allow the sensor of the HMD to capture images of the second set of optical elements disposed on the glasses, when the gaze detection function of the HMD is disabled.

23. The system of claim **20**, wherein the HMD further includes one or more optical elements that are disposed on the HMD and directed toward eyes of the user, the one or more optical elements are activated to enable the sensor of the HMD to capture position and gaze of the eyes of the user while the eyes of the user are being illuminated by said one or more optical elements of the HMD, when the gaze detection function of the HMD is activated.

24. The system of claim **22**, wherein the sensor of the HMD is further configured to disable the one or more optical elements of the HMD in response to disabling the gaze detection function of the HMD.

25. The system of claim **24**, wherein the disable of the gaze detection function of the HMD further includes generating a signal, by the sensor of the HMD, to activate the second set of optical elements on the glasses and to disable the gaze sensor of the glasses.

26. The system of claim **17**, wherein the glasses is communicatively coupled to the HMD through a wireless, near-field communication connection to transmit the encoded signal and encoded gaze data to the HMD.

27. The system of claim **17**, wherein the image frame processor of the HMD, when executed, is configured to communicate the gaze information to a computer communicatively coupled to the HMD, to produce the image frames.

28. The system of claim **27**, wherein the computer is integrated in the HMD.

29. The system of claim **27**, wherein the computer is a separate computing device that is communicatively coupled to the HMD through a wired or wireless connection.

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